

Patent Claims

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1. Electromechanical switch incorporating in its switch housing at least one electrically conductive switching element (1) with associated electrically conductive contact surfaces (2), characterized in that the area of the switching element (1) that faces away from the contact surfaces is at least partly enclosed by an elastic diaphragm (5) which also encloses at least the region containing the contact surfaces (2) associated with the switching element (1) and tightly butts against the switch housing (4; 6).
 2. Switch as in claim 1, characterized in that the elastic diaphragm (5) consists of a thermoplastic and especially an elastomeric material.
 3. Switch as in claim 1 or 2, characterized in that, at its transition between the switching element (1) and the housing (4; 6), the diaphragm (5) is prestressed, thus resiliently pressing the switching element (1) against the contact surfaces (2).
 4. Switch as in one of the claims 1 to 3, characterized in that the switch housing (4; 6) consists of two sections, with a base plate (4) containing the contact surfaces (2),
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and a cover (6) with an opening (6') through which protrudes a part of the switching element (1) with a diaphragm (5), which said two housing sections (4; 6) are preferably connected in self-locking fashion by clamping or welding.

5. Switch as in one of the claims 1 to 4, characterized in that the switching element (1) is pin-shaped and has a round or oval cross section while its end (1') which makes contact with the contact surfaces (2) is preferably rounded into a convex tip.
6. Switch as in one of the claims 1 to 5, characterized in that, in the area where it rests against the switching element (1) and/or in the transitional area between the switching element (1) and its connection to the switch housing (4; 6), the diaphragm (5) is provided on its inside and/or outside with one or several notches (7).
7. Switch as in one of the claims 1 to 6, characterized in that the switching element (1) consists of a metal.
8. Switch as in one of the claims 1 to 7, characterized in that three and preferably four contact surfaces (2) are associated with one switching element (1).

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9. Switch as in one of the claims 1 to 8, characterized in that the contact surfaces (2) are constituted of contact pins (3) whose ends (2) facing the switching element (1) are hemispherical or mushroom-shaped.

xy 10. Switch as in one of the claims 1 to 9, characterized in that the switch housing or the switch-housing sections (4; 6) consist of a 2-component injection-molded plastic material.

1, 2, 4-10 and 12
11. Use of a switch per one of the claims 1 to 10 in miniaturized devices [and especially in hearing aids.]

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201710-04649660